

immune to having a heart attack. Two recent reports^{7,8} add further support to this statement. Each describes an acute fatal myocardial infarct occurring in a 40-year-old man who had had many years of experience as a competition distance runner and was performing at his best level at the time of his sudden unexpected death. Both reports are documented by autopsy findings.

The oft repeated statement that the ability to complete a marathon confers immunity to heart attacks for a certain number of years is not supported by

facts and may be dangerously misleading. There are undoubtedly many people doing distance running, both competitively and for recreation, who have serious heart disease and do not know it. Such a disease in the stage before symptoms appear can only be detected by special testing (stress EKG and apex EKG) which is not done in the routine medical checkup. For this reason, all individuals (especially those over 30) who compete or engage in a sport or activity requiring vigorous physical exertion should have a maximal stress EKG test.

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Umbilical Hernia in Infants and Children

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An umbilical hernia results from incomplete closure of the fascia of the umbilical ring through which intra-abdominal organs can protrude. It is seen so often by pediatricians and surgeons that it is considered an incidental finding, however, this hernia is a problem of deep concern to the parents.

The incidence of umbilical hernia is very high in premature infants. Evans¹ states that the incidence varies from 84 percent in newborns weighing 1,000 to 1,500 gm to 20.5 percent in those weighing 2,000 to 2,500 gm. For some unknown reason umbilical hernia is more common in black than white children. Crump² reported a 41.6 percent incidence in black infants under one year of age. This incidence decreased steadily to 15.9 percent at the age of four years and was essentially zero after eight years of age. Other studies show that fibrous proliferation with complete obliteration of the umbilical ring occasionally is delayed as much as two or three years but that after this age, the rate of spontaneous cure markedly decreases. Until additional studies are done on the natural history of the umbilical hernia, there

will be continued confusion as to the proper time for operative intervention.

Much has been written about strapping the umbilical hernia in infants. Strapping the umbilicus relieves some of the anxiety of the parents but it is doubtful if it benefits the infant in hastening closure of the ring. The rate of centripetal contraction of the umbilical ring is approximately 18 percent of the area of the defect per month. It appears that after the infant is fully ambulatory there is an increase in the rate of closure. The prognosis for spontaneous cure of supraumbilical hernia is generally considered poor. In some studies, however, healing of supraumbilical hernias has been noted to occur comparably well, as in true umbilical hernias.³

The indications for surgical repair of an umbilical hernia must be evaluated on an individual basis.⁴⁻⁶ Specific symptoms which demand surgical treatment, regardless of age, are rare and operation in this group of children is usually limited to complications of the hernia, namely, incarceration, strangulation, or rupture. At the present time there is no unanimity of opinion as to the ideal time for elective repair. If there is protrusion and the fascial defect measures 1½ cm or larger, at 36-48 months, we believe surgical repair is warranted. If an umbilical hernia exists in a female infant at three years, surgical repair seems indicated because of a possibility of a recurrence during pregnancy

in adulthood. Prompt operative correction of supraumbilical hernias is also advised.

The operation for umbilical hernia is a simple one. Under general anesthesia a small curved incision is made in the loose skin of the umbilicus. The peritoneal sac is dissected from the fascia and closed by a pursestring or running suture of surgical gut. The edge of the rectus sheaths are approximated in the midline with silk sutures. To form a normal-appearing inverted umbilicus, a silk suture is placed in the undersurface of the most protuberant skin of the umbilicus and is brought down and sutured to the anterior surface of the fascia. The skin is closed with a few fine subcuticular sutures. A small piece of gauze is wadded up, placed over the umbilicus, and fixed with adhesive tape. The child leaves the hospital the morning following surgery and returns for follow-up in one week. The complication and recurrence rates are nil.

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